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 SECURITY INFORMATION
 CENTRAL INTELLIGENCE AGENCY
 INFORMATION FROM
 FOREIGN DOCUMENTS OR RADIO BROADCASTS

REPORT

CD NO.

STAT

COUNTRY Poland

DATE OF INFORMATION 1948, 1952

SUBJECT Economic - Agriculture
Scientific - Medicine, veterinary, virus
disease

DATE DIST. 19 Jan 1953

HOW PUBLISHED Weekly newspaper, monthly periodical

WHERE PUBLISHED Warsaw, Lublin

NO. OF PAGES 4

DATE PUBLISHED Oct 1948 - 28 Sep 1952

LANGUAGE Polish

SUPPLEMENT TO REPORT NO.

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SOURCE Newspaper and periodical as indicated.

INCIDENCE AND TREATMENT OF FOOT
 AND MOUTH DISEASE IN POLAND

CONTROL OF DISEASE -- Warsaw, Gluzba Zdrowia, 28 Sep 52

The occurrence of the foot and mouth disease is noted in Poland from time to time. It has been confirmed that the disease occurred in the Zary and Zegar area of the Zielona Gora Wojewodztwo at the end of 1951. A short time later, the disease was noted in the Szczecin and Lublin wojewodztwos.

The foot and mouth disease is caused by a virus. It attacks cattle, goats, pigs, and sheep and can be easily detected. Diseased cows give less milk. All diseased animals eat poorly, salivate, and sometimes become lame. If not treated, the disease may become fatal.

As compared to the 1938 - 1939 epidemic in Poland, the present occurrences as a rule are mild. However, the spread of the disease could cause a reduction in the cattle population. The Ministry of Agriculture and the Centralny Zarzad Weterynaryj (Central Administration of Veterinary Medicine) have issued pertinent orders for combating the disease and have quarantined the infected areas.

Incidence of the disease should be reported within 24 hours to the presidium of the powiat peoples' council which should send a veterinarian to the spot immediately. Simultaneously with reporting the suspected incidence of the disease, the suspected animals, especially in collective farms, must be isolated and not permitted outside the farm area. The owners of the animals must not visit other farms and public places. When the existence of the disease has been definitely established in the area, no outsiders are to be allowed within the infected area except health authorities. Milk from infected cows must be sterilized before using.

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Treatment for the foot and mouth disease consists of applying antiseptics to the affected parts in animals and humans. The powiat veterinarians are assisted by fumigators or veterinary assistants.

If infection occurs in pastures, the noninfected animals must be kept in enclosures. In the event of compulsory slaughter, the head, the gullet, entrails, heart, stomach, and feet of the animal must be scalded. The skins of the animals may be delivered to the collection centers after they have been soaked in milk of lime for 24 hours. Warning signs must be posted at the entrance to the farm, barn, pastures, etc. No articles may be removed from farms or enclosures which may have come in contact with the infected animals. Mats soaked in disinfectant prescribed by a veterinarian must be placed at the entrance to enclosures. When the disease has died out all affected farms and enclosures must be disinfected under the supervision of the veterinary fumigator. A one-percent solution of caustic soda is used as a disinfectant for humans and animals and a 2-percent solution for enclosures and equipment.

In rare instances human beings also succumb to the disease. Orders have been issued by the Centralny Zarzad Weterynaryjny to protect the population from tainted milk being brought to market. Milk from infected areas must be delivered to dairies which are equipped with sterilizers. Dairies in infected areas not equipped with sterilizers have been closed.

Since even isolated cases of the disease in humans and animals may contribute to its spread, the veterinary authorities in Poland have adopted preventive measures to check the occurrence of the disease in other regions.

INCIDENCE AND TREATMENT -- Lublin, Medycyna Weterynaryjna, Vol VIII, No 9, Sep 52

An outbreak of the foot and mouth disease was noted on the western border of Poland on 22 September 1951. The occurrences were sporadic, primarily covering parts of Zielona Gora and Szczecin wojewodztwos, and Koszalin, Gdansk, Poznan, and Wroclaw wojewodztwos. In March 1952, the disease spread through 704 farms. The virus type identified so far is B₄ (A5-Valee). In combating the disease, sanitary and police regulations are enforced.

During the present epidemic, Ośrodek Naukowo-Badawczy nad Prysyczyną (Scientific Research Center for the Hoof and Mouth Disease) in Gorzow Wielkopolski started to collect blood from cattle which had recovered from the disease. The serum obtained from recovered animals was to be used to ameliorate the disease or to prevent it entirely, especially in hogs, valuable breeding stock, and large bulls.

Since we had no accurate data as to the actual value of serum obtained from the blood of recovered animals, mass experiments were performed in May 1952 in Witkowo Gmina. To test the prophylactic value of the serum, the cattle of the Kolaczkowo and Folwark state farms were used. These were inoculated with 0.5 milliliters of the normal horse serum or the serum obtained from cattle that had recovered. After 3 days, the cattle used were infected with the saliva of sick cows. In addition, the prophylactic and healing value of the serum was tested on 121 state farms and individual farms as follows: as a prophylactic treatment the serum obtained from recovered cattle was used on one bull, 7 cows, 84 calves, 7 sows, 18 young boars, 283 young pigs, and 3 sheep, a total of 402 animals. Positive results were obtained in 392 cases, doubtful in five cases, and negative in 15 cases. Of these 15 cases, nine were suckling pigs and two premature calves. In treating the disease, the serum was used on 2 bulls, 2 cows, 2 heifers, 14 calves, 42 sows, 19 young boars, and 128 young pigs, a total of 182 animals. Positive results were obtained in 182 cases, and negative in 27 cases which included 11 suckling pigs, 5 newborn calves, and one tubercular cow.

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On the basis of experiments performed, the following conclusions may be drawn:

1. The serum obtained from the blood of animals which have recovered from the foot and mouth disease is entirely harmless.
2. The serum should be used subcutaneously and the dose distributed so as to inject not more than 20 milliliters in one place in small animals (young pigs and lambs), 50 milliliters in medium-sized animals (calves, sheep, goats, sows), and 100 milliliters in large animals (cattle).
3. In prophylactic treatment, it has been proved that the serum injections have been effective in young pigs and calves not only in areas free of the disease but also in infected areas.
4. Adult animals inoculated with the serum are not entirely immune to the disease; however, the incubation period is extended several days. The disease may appear in a light form, or it may run its course without the usual symptoms. The animal's appetite is not impaired and milk yield is reduced only 8 percent for 5 days.
5. As a prophylactic measure, bull- (especially large bulls), sick cows, and valuable breeding stock should be inoculated and isolated from the locus of the disease and the barns and personnel properly disinfected.
6. Prophylactic doses are as follows: adult cattle, 0.5 milliliter per kilogram of weight; calves in uninfected areas, one milliliter per kilogram of weight; in infected areas, 1.5-2 milliliters per kilogram of weight (50-100 milliliters); hogs, 0.5 milliliter per kilogram of weight, young pigs, 10-20 milliliters per head. The dose for young pigs regardless of weight should not be less than 10 milliliters per head.
7. A newborn calf in an infected area should be separated immediately from the sick cow, fed boiled milk, and inoculated at the quickest possible moment. Young pigs, especially in infected areas, may be inoculated when they are 3 days old.
8. In prophylactic treatment, the serum takes effect in animals in 10-12 days in enclosures and 8 days when animals are being shipped. After this period has elapsed the treatment should be repeated if there is continued danger of infection.
9. In treating the disease in adult animals, the serum does not always give positive results. These results depend a great deal on an early inoculation, the dosage used, and on the character of the symptoms. On the other hand, calves and pigs show a marked improvement very quickly. Sick cows, young boars, and hogs have made a very quick recovery when their location and general conditions have been changed, however, in very severe cases of the disease, the serum does not always give positive results.
10. In treating the disease, the dosage for cattle should be 0.75-1 milliliter per kilogram of weight; for calves, 2-3 milliliters per kilogram of weight; for young pigs, 15-30 milliliters; young boars and hogs, one milliliter per kilogram of weight. In very serious cases, the serum injection should be repeated after 4 days.
11. The serum is good for one year. It should be stored in a cool, dry, dark place; if bottled in colorless bottles, the bottles should be wrapped in paper.

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12. The usual horse serum, used on 39 head of cattle to compare its effectiveness with that of the serum obtained from cattle which had recovered from the foot and mouth disease, provided no immunity. The cows received a subcutaneous injection of the normal horse serum in the same dosage as that prescribed for the other serum and after 3 days were infected with saliva from sick cows. After a short period, all the cows came down with the foot and mouth disease. Their appetites were greatly reduced, eruptions appeared in the oral cavity in almost all cases, and on the hoofs. The milk yield was reduced 55.6 percent.

VACCINE AVAILABLE FROM SWITZERLAND IN 1948 -- Lublin, Medycyna Weterynaryjna, Vol IV, No 10, Oct 48

According to information received from Professor Fluckiger, the State Institute in Basel which produces vaccine for foot and mouth disease can, in case of need, supply Poland with up to 600 liters of vaccine 2 weeks after receipt of the order. The cost is 30 US dollars per liter, or about 85 cents per unit fob Basel and 90 cents including transportation. This possibility is of great importance to Poland in case of an epidemic.

Since cases of foot and mouth disease have broken out in several European countries, this epidemic might invade Poland. It is impossible for the Panstwowy Instytut Weterynaryjny (State Veterinary Institute) to produce vaccine at present because of a lack of buildings and equipment needed to isolate infected cattle.

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